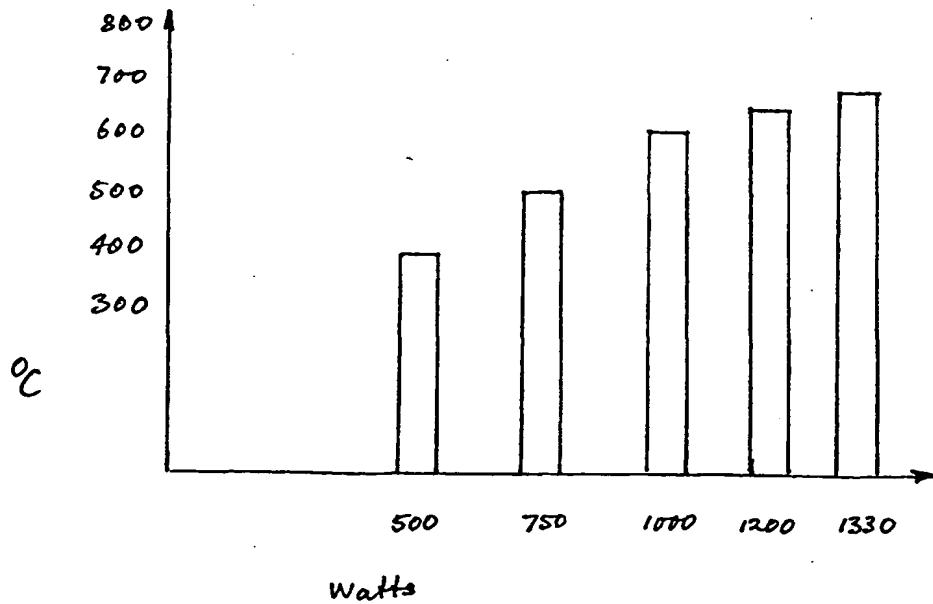




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(54) Title: THIN FILM HEATING ELEMENT



## (57) Abstract

A thin film heating element capable of withstanding power densities of 10–20 watts  $\text{cm}^{-2}$  and/or temperatures up to 650°C is disclosed. The preferred form of the heating element includes a layer of tin oxide doped with relatively large quantities of cerium and lanthanum deposited on an insulating substrate by pyrolysis of a solution of monobutyl tin trichloride containing the above rare earth elements. The solution and subsequent oxide layer further include donor and acceptor elements such as antimony and zinc to enhance the conductivity of the heating element.